

What is claimed is:

1. A mechanism for providing positive retention and release of a socket or fitting on a power driven nut runner or nut setter utilizing a push rod that interfaces with a sliding post or pin having mating surfaces for developing movement in perpendicular directions.
2. The mechanism of claim 1 comprising first and second pieces, said first piece comprising a sliding shaft, said second piece comprising a post or pin, and said first and second pieces moving perpendicular to each other when the mating surfaces of said first and second pieces are engaged.
3. A method of shielding or partially encapsulating an exposed portion or button end of a push rod so that a positive retention mechanism is prevented from inadvertent activation by contacting said exposed portion thereby releasing a socket or fitting.
4. The mechanism of claim 2 wherein said sliding shaft has a full or partial cross section other than of round configuration for preventing a binding rotation when said sliding shaft interfaces with a similar cross sectional area inside a tool head or housing thereby allowing said mating surfaces which provide the perpendicular motion component to provide alignment for smooth motion.
5. The mechanism of claim 2 wherein said sliding shaft has a full or partial cross section of round configuration.
6. A method for retracting a socket retention post in a torque tool head comprising the steps of:
  - providing a spring-loaded pushbutton pin through the torque tool head which mates with a socket retention post;
  - depressing said spring-loaded pushbutton pin to draw said socket retention post inward via an inclined surface thereby allowing a socket to be removed or installed; and,

removing or installing the socket thereby providing spring return of said spring-loaded pushbutton pin to initial position locking said socket retention post in the outward position.

7. In combination in a torque tool socket release apparatus:

a sliding shaft and pin which move perpendicular to each other when their mating surfaces are engaged;

a positive retention mechanism; and,

a shielding member partially encapsulating the hand actuated or exposed end of said sliding shaft so that said positive retention mechanism does not inadvertently activate thereby releasing the socket.

8. In combination:

a return spring (10);

an angle pin (12);

a nut runner power tool head (2);

a push rod (13);

a socket retention post (6);

a nut runner square drive (14);

a nut runner gear (15) for transferring motor driven power to said nut runner square drive (14);

a socket retention post (6) for retaining a socket on said square drive (14);

said socket retention post (16) moving perpendicular to said push rod (13) for retaining the socket on said square drive (14);

mating surfaces of said socket retention post (6) and said angle pin (12) disposed for sliding past each other to positively retain or release the socket; and,

said return spring (10) compressed to keep said push rod (13) retracted thereby maintaining socket retention post (6) in an engaged position.